HP

Storage Essentials 4.0 Integration Guide

Integrating HP Storage Essentials with HP Systems Insight Manager

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About this guide

This guide provides information about:

- Making the HP Storage Essentials menu accessible from HP SIM.
- Enabling HP SIM to receive events from HP Storage Essentials.

Intended audience

This guide is intended for:

- Network Engineers
- Administrators
- Any one that needs to monitor and/or manage their file servers

Prerequisites

Prerequisites for using this product include:

- Networking
- Storage Area Networks (SANs)
- The Common Information Model (CIM)

Related documentation

- Online help for HP Storage Essentials 4.0
- HP Storage Essentials 4.0 Installation Guide
- HP Storage Essentials 4.0 User Guide
- HP Storage Essentials 4.0 Application Guide
- HP Storage Essentials 4.0 CLI Guide
- HP Storage Essentials 4.0 for File Servers Guide

These and other HP documents can be found on the HP web site: http://www.hp.com/support/

Document conventions and symbols

Table 1 Document conventions

Convention	Element
Medium blue text: Figure 1	Cross-reference links and e-mail addresses
Medium blue, underlined text (http://www.hp.com)	Web site addresses
Bold font	• Key names • Text typed into a GUI element, such as into a box • GUI elements that are clicked or selected, such as menu and list items, buttons, and check boxes
Italics font	Text emphasis
`Monospace font`	• File and directory names • System output • Code • Text typed at the command-line
`Monospace, italic font`	• Code variables • Command-line variables
`Monospace, bold font`	Emphasis of file and directory names, system output, code, and text typed at the command line

△ **CAUTION:** Indicates that failure to follow directions could result in damage to equipment or data.

IMPORTANT: Provides clarifying information or specific instructions.

NOTE: Provides additional information.

HP technical support

Telephone numbers for worldwide technical support are listed on the HP support web site: http://www.hp.com/support/.

Collect the following information before calling:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Applicable error messages
- Operating system type and revision level
- Detailed, specific questions

For continuous quality improvement, calls may be recorded or monitored.

HP strongly recommends that customers sign up online using the Subscriber's choice web site at http://www.hp.com/go/e-updates.

- Subscribing to this service provides you with e-mail updates on the latest product enhancements, newest versions of drivers, and firmware documentation updates as well as instant access to numerous other product resources.
- After signing up, you can quickly locate your products by selecting **Business support** and then **Storage** under Product Category.

HP-authorized reseller

For the name of your nearest HP-authorized reseller:

- In the United States, call 1-800-345-1518.
- Elsewhere, visit the HP web site: http://www.hp.com. Then click **Contact HP** to find locations and telephone numbers.

Helpful web sites

For third-party product information, see the following HP web sites:

- http://www.hp.com
- http://www.hp.com/go/storage
- http://www.hp.com/support/

1 Setting Up HP Storage Essentials with HP Systems Insight Manager (HP SIM)

HP Storage Essentials is a versatile, comprehensive software package that easily plugs into HP SIM, thus expanding the features of HP SIM. Integration consists of:

- Tools to launch to HP Storage Essentials from the HP SIM menu
- HP Storage Essentials events sent to HP SIM

This document assumes you have already installed HP Storage Essentials. If you want to use HP Storage Essentials with HP SIM, you must configure HP SIM and Storage Essentials as described in the following topics so that Storage Essentials can work seamlessly within HP SIM:

- Installing the HP Storage Essentials Tools into HPSIM, page 11
- How to Receive Events from HP Storage Essentials, page 15

2 Installing the HP Storage Essentials Tools into HPSIM

This chapter describes the following:

- "Step 1 - Modifying the Tool Definition File" on page 11
- "Step 2 - Adding the HP SE Toolbox" on page 11
- "Step 3 - Registering HP Storage Essentials tools" on page 11
- "Step 4 - Accessing HP Storage Essentials" on page 12
- "Removing Access to Storage Essentials from HP SIM" on page 13

Step 1 - Modifying the Tool Definition File

HP Storage Essentials is plugged into the HP SIM Tools menu through the HP Storage Essentials Tool Definition XML (shown in Appendix A).

1. Copy the text in Appendix A and paste it in a text editor.
2. Within the editor, alter the line that contains the text HPSE_HOST such that HPSE_HOST will reflect the DNS name of the HP Storage Essentials management server.

   For example, if the name of the host running Storage Essentials is MYHOST, you would replace HPSE_HOST with MYHOST, as shown in the following example:

   ```
   <main-url>http://MYHOST/servlet.html?page=Home</main-url>
   ```

   This URL is accessed when the user clicks its corresponding menu option.
3. When you are done with modifying the file, save the file in a directory of your choosing (such as "c:\") with the following name: HPSIM_SE_integration.xml

Step 2 - Adding the HP SE Toolbox

Create a toolbox in HPSIM that will contain the tools that will be added in step 3.

1. Open a command prompt window and go to the following directory:

   ```
   \Program Files\HP\Systems Insight Manager
   ```
2. Enter the following at the command prompt:

   ```
   mxtoolbox -a "HP SE Tools" -d "HP Storage Essentials Toolbox"
   ```

Step 3 - Registering HP Storage Essentials tools

To make HP SIM aware of your changes to its menus:

1. Open a command prompt window and go to the following directory:

   ```
   \Program Files\HP\Systems Insight Manager
   ```
2. Enter the following at the command prompt:

   ```
   mxtool -a -f c:\HPSIM_SE_integration.xml
   ```

   where c:\ is the location of the HPSIM_SE_integration.xml file
3. Log out and then back into HP SIM. You do not need to restart HP SIM.

Step 4 - Accessing HP Storage Essentials

To access HP Storage Essentials from HP SIM:

1. You should be already logged into HP SIM (see the previous section). If you are not already logged into Insight Manager, do so now.
2. Select **Tools** > **Integrated Consoles** > **HP Storage Essentials**.

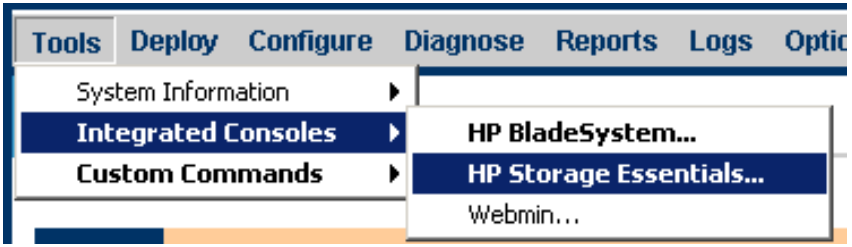

Figure 1 Accessing Storage Essentials from HP SIM

3. You are then launched to the login page for HP Storage Essentials (or home page once logged in).
4. You can quickly determine the version of HP Storage Essentials without leaving HP SIM by selecting **Help** > **About HP Storage Insight Manager**, as shown in the following figure:

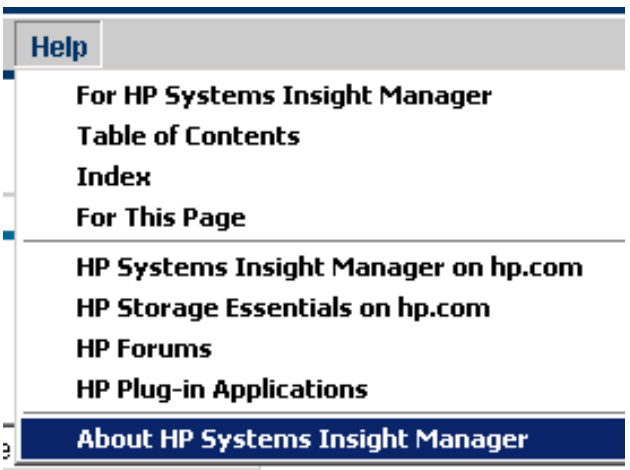

Figure 2 Accessing information about the version of HP Storage Essentials

The version number for HP Storage Essentials is shown in the Plug-in Applications table.

5. You can visit the HP Storage Essentials website by selecting **Help** > **HP Storage Essentials on hp.com**. See Figure 2.

Removing Access to Storage Essentials from HP SIM

To unregister the Storage Essentials tools from the HP SIM menu:

1. Open a command prompt window and go to the following directory:

   ```
   \Program Files\HP\Systems Insight Manager
   ```

2. Enter the following at the command prompt:

   ```
   mxtool -r -f c:\HPSIM_SE_integration.xml
   ```

   where c:\ is the location of the HPSIM_SE_integration.xml file

3. Remove the HP SE Toolbox.

   ```
   mxtoolbox -r "HP SE Tools"
   ```

4. Log out and then back into HP SIM. You do not need to restart HP SIM.
5. Once these tools are unregistered, they do not appear in the menu structure and the XML file can be altered or removed from the system.

3 How to Receive Events from HP Storage Essentials

This chapter describes the following:

- "Step 1 Compile and register the HP Storage Essentials MIB" on page 15
- "Step 2 - Modifying and Registering the Event List Query" on page 15
- "Step 3 - Discover the Server Running HP Storage Essentials" on page 16
- "Step 4 - Configure HP Storage Essentials to send SNMP traps to HP SIM" on page 16
- "Step 5 - View HP Storage Essentials Events in HP SIM" on page 17
- "Disabling the Feature for Receiving Events from HP Storage Essentials" on page 17

If you want HP SIM to receive events from HP Storage Essentials, you must:

- Compile and register the HP Storage Essentials MIB in HP SIM.
- Create an HP Storage Essentials event list in HP SIM
- Configure HP Storage Essentials to send its traps to HP SIM.

Step 1 Compile and register the HP Storage Essentials MIB

1. Insert the CIM Extensions CD-ROM from HP Storage Essentials into the CD-ROM drive of the server running HP SIM.
2. Go to the Tools directory on the CIM Extensions CD-ROM.
3. Copy the HPSE-Traps.mib file in the Tools directory to the following directory on the server running HP SIM:

   ```
   \Program Files\HP\System Insight Manager\mibs
   ```
4. To compile the HPSE-Traps.mib file, open a command prompt window and go to the `\Program Files\HP\Systems Insight Manager\mibs` directory. Then, enter the following:

   ```
   mcompile HPSE-Traps.mib
   ```

   The file, HPSE-Traps.cfg, is created.
5. To register the MIB for HP Storage Essentials, run the following command at the command prompt:

   ```
   mxmib - a HPSE-Traps.cfg
   ```

Step 2 - Modifying and Registering the Event List Query

HP Storage Essentials Event List is created using the HP Storage Essentials Query XML (shown in Appendix B).

1. Copy the text in Appendix B and paste it in a text editor.
2. Within the editor, alter the two lines that contain the text HPSIM_HOST such that HPSIM_HOST will reflect the DNS name of the HP SIM management server.

   For example, if the name of the host running HP SIM is MYHOST, you would replace HPSIM_HOST with MYHOST, as shown in the following example:

   ```
   owner="MYHOST\mxadmin"
   ```

3. When you are done with modifying the file, save the file in a directory of your choosing (such as "c:\") with the following name: HPSIM_EventList.xml
4. To make HP SIM aware of this new event list:
   a. Open a command prompt window and go to the following directory:

   ```
   \Program Files\HP\Systems Insight Manager
   ```

   b. Enter the following at the command prompt:

   ```
   mxquery -a -f c:\HPSIM_EventList.xml
   ```

   where c:\ is the location of the HPSIM_EventList.xml file
   c. Log out and then back into HP SIM. You do not need to restart HP SIM.

Step 3 - Discover the Server Running HP Storage Essentials

To make HP SIM aware of the server running HP Storage Essentials, run a manual discovery as described in the steps in this section.

IMPORTANT: If HP Storage Essentials is running on a dual-homed server, provide the IP address that HP SIM can use to contact the server, most likely the primary IP address.

---

1. Access HP SIM.
   a. Enter the following in a Web browser:

   ```
   https://host_name:50000
   ```

   where host_name is the name of the server running Insight Manager.
   b. If you are asked about a security certificate, click **Yes**.
   c. If you do not have the Java plug-in, you are asked to install it.
   d. Type a user name for accessing HP SIM in the **User Name** field.
   e. Type a password for accessing HP SIM in the **Password** field.
   f. If applicable, type a domain in the **Domain** field.
   g. Click **Secure Login**.
2. Select **Options** > **Discovery** > **Manual Discovery**.
3. Select one of the following:
   - **System Name** - Provide the system name of the server running HP Storage Essentials.
   - **IP Address** - Provide the IP address of the server running HP Storage Essentials.
4. Click **Add System**.

   HP SIM discovers the server running HP Storage Essentials.

Step 4 - Configure HP Storage Essentials to send SNMP traps to HP SIM

1. Log onto HP Storage Essentials.
2. Select **Configuration** > **Traps**.
3. Select **Enable Trap Generation**.

4. Type the following for the community string: `public`
5. Click **Save**.
6. Type the IP address of the server running HP SIM.
7. Click **Add**.
8. Log into HP SIM and discover the server running HP Storage Essentials. You will then start seeing events from HP Storage Essentials in HP SIM.

Step 5 - View HP Storage Essentials Events in HP SIM

To view only events from HP Storage Essentials, click **All Storage Essentials Events** under **Event Lists** > **Storage Essentials** in the System Lists pane in HP SIM, as shown in the following figure.

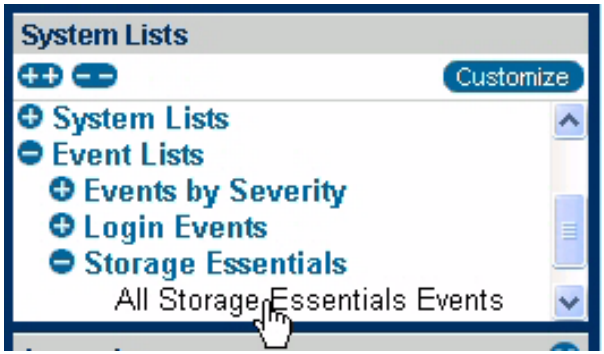

Figure 3 Accessing Events from Storage Essentials in HP SIM

Disabling the Feature for Receiving Events from HP Storage Essentials

You can disable HP SIM so that it no longer receives events from HP Storage Essentials, as described in the following steps:

1. Open a command prompt window and go to the following directory:

   `\Program Files\HP\Systems Insight Manager`
2. To remove the event list for HP SIM, enter the following at the command prompt:

   `mxquery -r -f c:\HPSIM_EventList.xml`

   where c:\ is the location of the HPSIM_EventList.xml file

   Once the mxquery command is entered, the event list no longer displays Storage Essentials. The `HPSIM_EventList.xml` file can be altered or removed from the system.
3. To make HP SIM no longer aware of the MIB for Storage Essentials, enter the following at the command prompt.

   `mxmib –d HPSE-Traps.mib`
4. To remove the `HPSE-Traps.mib` file, go to the `\Program Files\HP\Systems Insight Manager\mibs` directory and delete the file.
5. Log out and then back into HP SIM. You do not need to restart HP SIM.

6. Disable the sending of traps from HP Storage Essentials by removing the IP address of the server running HP SIM that was added in Step 4 - Configure HP Storage Essentials to send SNMP traps to HP SIM, page 16.

A Code for the HPSIM_SE_integration.xml File

```
<?xml version="1.0" encoding="UTF-8" ?>
<!--                                                                    -->
<!--  2005 Hewlett-Packard Development Company, L.P.,  All Rights Reserved.
-->
<!--                                                                    -->
<tool-list>

    <web-launch-tool name="HP Storage Essentials" revision="4.0" >
       <category>Local Tools</category>
       <description>
            Manage storage resources with HP Storage Essentials
         </description>
       <toolbox toolbox-name="HP SE Tools" />
       <web-block accepts-targets="false">
           <main-url>http://HPSE_HOST/servlet.html?page=Home</main-url>
        </web-block>
        <attribute name="menu-path">Tools|Integrated Consoles</attribute>
          <attribute name="product-name">HP Storage Essentials</attribute>
          <attribute name="product-version">4.0</attribute>
          <!-- Remove the next line for 'in frame' launch -->
          <attribute name="target-frame">_blank</attribute>
    </web-launch-tool>

    <web-launch-tool name="HP Storage Essentials on hp.com" revision="4.0" >
       <description>
            Launch to the HP Storage Essentials product information page
         </description>
       <web-block accepts-targets="false">
         <main-url>
    http://h18006.www1.hp.com/products/storage/software/esuite/index.html
          </main-url>
        </web-block>
        <attribute name="menu-path">Help</attribute>
          <attribute name="menu-sort-key">36</attribute>
          <attribute name="show-title">false</attribute>
          <attribute name="show-ellipsis">false</attribute>
          <attribute name="target-frame">_blank</attribute>
    </web-launch-tool>

</tool-list>
```

B Code for the HPSE_EventList.xml File

```
<?xml version="1.0" encoding="windows-1252"?>
<!--                                                                                    -->
<!--  2005 Hewlett-Packard Development Company, L.P.,  All Rights Reserved.
-->
<!--                                                                                    -->
<query-list>
    <category name="Storage Essentials" type="EventViews" access="public"
              owner="HPSIM_HOST\mxadmin" />
    <query name="All Storage Essentials Events"
           type="EventViews"
           category-name="Storage Essentials"
           access="public"
           owner="HPSIM_HOST\mxadmin">
           <criteria name="CriteriaByEventType"
                     sense="INCLUDE">
                     <value>HP Storage Essentials</value>
           </criteria>
    </query>
</query-list>
```

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